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Questions & Answers L-147 through L-170
Posted 11/25/2009

Question L-147: Section L, pages 4 & 5: Please provide square footage of contaminated areas as noted for C-Wing 1st and 2nd floors, D-Wing 1st floor, E-Wing 1st floor, and H-Wing 1st floor. Also please provide type of contamination.

Answer: Reference Section L, Attachment L-4, Representative Sample Task, Section 4.2. With reference to the sample task Figures 7 and 8 (scale provided on Figures), please assume that the known or potentially contaminated areas are as follow:

Wing C, first floor: Rooms designated as "CL" including rooms found at the far left in Figure 7, the central left blocks of rooms, and rooms on the right side of Wing C on Figure 7. Known and suspected types of contamination are as follow: CL-103, 106, 106A, 122, 134, 134A: suspect low levels of beta/gamma contamination under paint (wall). CL-123, 124, 125, 125A, 126, 127,129,130, average net surface activity of 9600 dpm/100 cm^2 beta/gamma (floor). CL-133, 133A, 135, 137, average surface activity of 12,075 dpm/100 cm^2 beta/gamma (floor). CL-136, 136A, isolated hot spots of up to 126,000 dpm/100 cm^2 beta/gamma (floor).

Wing C, second floor: Rooms designated as "CL" including rooms on the right and left-hand sides of Wing C on Figure 8, as well as centrally located rooms. Known and suspected types of contamination are as follow: CL-203, 207, 209, 211: average net surface activity of 4900 dpm/100 cm^2 beta/gamma. CL-204, 204A, 204C: isolated hot spots of up to 25,000 dpm/100 cm^2 beta/gamma (floor). CL-208, 208A, 212, 212A: suspect low levels of contamination under paint (wall). CL-215, 217, 217A, 217B, 221, 223, 225, 227: isolated hot spots of up to 4500 dpm/100 cm^2 beta/gamma (floor). CL-218, 220, 222, 226, 228, 233, 233A, 233B, 235, 235A, 237A, 237B: suspect low levels of contamination under paint (wall). CL-234, 234-A, 236: isolated hot spots of up to 3000 dpm/100 cm^2 beta/gamma (floor).

Wing D, first floor: Rooms designated as "DL" including DL 102A and 106A (left side of Figure 7); DL-109; DL 112 – 126 on upper central portion of D Wing on Figure 7; DL 131 and 131A; DL-132, 134, 136, 139, 137,135, 133 and 133A (right-hand portion of D Wing on Figure 7). Known and suspected types of contamination are as follow: DL 102A,106A,109, 131, 131A: suspect low levels of beta/gamma contamination under paint (wall). DL-112, 114 (glovebox facility), 120, and126: D-112, 114, 120 and 126 previously were used for fuel research; all materials have been removed but low levels of contamination remain, up to 50 dpm/100 cm^2 alpha and 8000 dpm/100 cm^2 beta/gamma. There are 3 gloveboxes in D-114 with average floor contamination of 140 dpm/100 cm^2 alpha and 480 dpm/100 cm^2 beta/gamma.) DL 133, 133A,135, 137, 136, 139, 134, 132 are former metallurgy labs with isolated hot spots of up to 23,000 dpm/100 cm^2 beta/gamma and 250 dpm/100 cm^2 alpha (floor).

Wing E, first floor: Figure 7, Rooms E-109, 109A, 109B, 109C; E-117A; E-117B. Rooms E-109 and 109C are hot cells previously used for research and reactor components including fuel cladding. Rooms E-109A and 109B were isolation rooms, E-117A was a work area, and E-117B was a vault. All materials have been removed but there is potential for contamination with low levels of uranium and mixed fission products on the floors and lower walls of the hot cell rooms as well as isolated hot spots in the isolation rooms, work area, and vault.

Wing H, first floor: Figure 7, Rooms H-100, 102, 104; H-121, 121A, 123; H-133; H-137, 137 A,B,C and D; H-139, 141, 143. H Wing is a former materials fabrication facility. Activities included milling, melting and casting of radioactive materials, primarily uranium. All materials have been removed but there is potential for low levels of contamination to remain in all rooms but particularly in H-123 (grinding room), H-133 (welding room) and H-137 (foundry).

Basement: Offerors should assume there is potential for contamination in the basement. There is known soil and groundwater contamination associated with the MRB as specified or identified in Section L, Attachment L-4, Representative Sample Task, Section 4.1, so there is potential for similar contaminants in the basement.

The solicitation will be amended.

Question L-148: Attachment L-4, Sample Task: What equipment is mounted on the roof? Please provide details of any identified equipment mounted on the roof.

Answer: Reference Attachment L-4, Representative Sample Task, As Built Drawing 1, 5 and Figure 12. As Built Drawing 5 for the F Wing shows only roof exhaust vents, wood walkways, and piping. In addition, the cooling tower is located on the roof as shown in As Built Drawing 1. On Figure 12, fan loft structures are visible on Wings G, E, C and D, as well as ducts and vents which are also visible on the roof of Wing H.

Question L-149: Attachment L-4, Sample Task: Please list of rooms in Wing C, D and H that are posted as radioactively contaminated? Please provide list of equipment, furniture, and other items present in these rooms, by room? Please provide radioactively contaminated survey information on items present in these rooms, by room?

Answer: Reference Attachment L-4, Representative Sample Task. See answer to Question L-147 regarding the list of contaminated and potentially contaminated rooms. Please see answer to Question L-132 regarding radiation survey information. Equipment, furniture, and other items have been removed from the MRB except for items specifically noted for the F Wing in Section 4.3 of the Sample Task, glove boxes (See answer to Question L-51), and information as summarized below:

Fume Hoods (approximate dimensions 50 inches wide by 30 inches deep by 59 inches high)

Wing C (assume contamination of 2,438 dpm/100 cm^2 beta/gamma on floor surfaces of Wing C fume hoods): CL- 203 (2 fume hoods), 204A, 207 (2 fume hoods), 208, 208A, 208B, 209, 211 (2 fume hoods), 222, 223 (2 fume hoods), 225 (3 fume hoods), 226, 227, 228.

Wing D (assume contamination of 655 dpm/100 cm^2 alpha and 1,887dpm/100 cm^2 beta/gamma on floor surfaces of Wing C fume hoods): DL- 134,135,139 (6 fume hoods).

Wing H there is no equipment furniture or other items present.

The solicitation will be amended.

Question L-150: Attachment L-4, Sample Task: Please provide room numbers for the radioactively contaminated areas in Wings C, D and H, as well as materials fabrication area, “Hot Machine Shop”, and the Electron Beam Laboratory in Wing F.

Answer: Reference Section L, Attachment L-4 Representative Sample Task, Section 4.3, 1^{st} paragraph. Please see answer to Question L-147 regarding the list of contaminated and potentially contaminated rooms in wings other than Wing F. Section 4.3, 1^{st} paragraph, contains the room numbers for the materials fabrication area, Hot Machine Shop and Electron Beam Laboratory. “The materials fabrication area includes the Electron Beam Laboratory (EBL) (Rooms F-117, F-117A, F-118, and F-188A) and the “Hot Machine Shop”, also referred to as General Purpose Shop (Room F-109). The Hot Machine Shop (Room F-109) contains a lathe, a grinder, several work benches, and two fume hoods (47 in. by 40.5 in. by 96 in.)”.

Question L-151: Reference 4.2 MRB Background. C-Wing 2nd floor contains uncontaminated offices, potentially contaminated labs with numerous fume hoods, and contaminated labs including an uncontaminated uranium machine shop and several contaminated small hot melt laboratories. D-Wing 1st floor contains a glove box facility along with other potentially contaminated labs, as well as uncontaminated offices, storage, and service areas. E-Wing 1st floor contains uncontained service and storage areas as well as a potentially contaminated cave and vault area. H-Wing 1st contains a contaminated facility previously used for milling, melting and casting of radioactive materials, primarily uranium, and a contaminated radiological machine shop for machining of radioactive materials, primarily uranium. Questions:

What are the waste masses, volumes and radionuclide concentrations in the above contaminated areas?
Answer: Please see answer to Question L-147.

Is the uncontaminated U machine shop an uncontrolled area meeting unrestricted release criteria?
Answer: The Uranium machine shop is contaminated.

The solicitation will be amended.

What is the limit for fissile materials exposed in the hot cell outside containers?
Answer: Please see answer to Question L-139.

Is any Beryllium present in any of the hot cell or machine shop areas?
Answer: There is no beryllium present in the MRB.

Question L-152: Can you provide detailed drawings and number of the MRB/FSMHF HEPA ventilation systems?

Answer: See answer to Question L-125. The drawings provided with the RFP and Amendment 002 are the most detailed drawings available.

Question L-153: Attachment L-4, Section 3.2, Page 2: This section states: "In 2007, an investigation into routine environmental monitoring results confirmed that groundwater contaminated with VOCs is present on the site in the vicinity of the MRB. The source of the contamination is suspected to be historic spills and leaks associated with previous chemical cleaning and storage in that building." Did the MRB chemical cleaning activities consist of degreasing? Was the total volume of carbon tetrachloride, tetrachloroethylene and trichloroethylene, before use, ten percent or more of the solvent mixture?

Answer: Reference Attachment L-4, Representative Sample Task, Section 3.2. DOE does not have detailed information on chemical cleaning and storage in the building; however, offerors should assume that the chemical cleaning activities did consist of degreasing.

Question L-154: The ventilation system drawings do not show the location and number of pre-filters in the HEPA ventilation system. What is the location and number of pre-filters?

Answer: See the answer to Question L-125.

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Question L-155: What are the dimensions, weight and TRU Inventories of each of the glove boxes?

Answer: Reference Section L, Attachment L-4, Representative Sample Task Section 4.3. Please see table below providing the dimensions and approximate weight (empty) of each of the glove boxes. The gloveboxes do not contain any TRU inventories.

D-Wing 1st Floor		Height	Length	Depth	Weight (lbs)
Glovebox Facility	D-114 (3 glove boxes)	6'	5'	2.75'	330
F-Wing Support Gloveboxes					
DRA Multi-Station Decon Glovebox	F115	8'	8'	3'	610
Unshielded Glovebox	F117	6'	6'	3'	480
Shielded Glovebox	F117	6'	6'	3'	480
Shielded Glovebox	F117	6'	6'	3'	480
Scanning Electron Microscope	F117a	8'	8'	3'	610
Glovebox	F117a	8'	8'	3'	610
Glovebox	F117a	8'	8'	3'	610
Shielded Electron Microprobe Glovebox	F118	6'	6'	3'	480
Scanning Auger Microprobe Glovebox	F118a	6'	6'	3'	480

The solicitation will be amended.

Question L-156: Can you provide details of the contaminated glove boxes and fume hood within the MRB/FSMHF?

Answer: Please see responses to Questions L-149 and L-155.

Question L-157: Section L, Attachment L-4, Paragraph 4.2, Material Research Building Background, states that all the wings of the MRB complex have a basement of comparable depth to the F-Wing basement. Paragraph 4.2 also states that "FSMHF and associated office support space is about 6.5% (20,000 ft2) of the total MRB space (304,572 ft2) (the actual hot cell is approximately 12,500 ft2). The total MRB space of 304,572 ft2 appears to be the total square footage for all eight wings of only floors 1 and 2,excluding the basement. Please:

- Identify the square footage of basement in the MRB complex exclusive of the hot cell. This information is not shown on the reference drawings.
- Identify the slab thickness for the basement outside of the hot cells.
- Verify that the 20,000 ft2 for FSMHF excludes the basement.

Answer: See answer to Question L-47 and L-74 for square footage calculations. Offerors should assume that the slab outside of the Hotcell is 8" reinforced Concrete with two layers of #6 rebar on 12 inch centers.

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Question L-158: Section L, Attachment L-4, Section 3.0, subsection 1, page 2/34 refers to elevated strontium detections detected by "testing" and presented on Figure 5. Section 4.0, subsection 4.1 indicates samples were collected by "cone penetrometer testing". Question: At what depth were the cone penetrometer groundwater samples collected?

Answer: Reference Section L, Attachment L-4, Representative Sample Task, Section 4.1, 4th paragraph and Figure 5. Offerors should assume that the cone penetrometer samples at the locations shown on Figure 5 were taken at approximately 20 feet below ground surface.

The solicitation will be amended.

Question L-159: Section L, Attachment L-4, Section 4.0, subsection 4.1, page 3/34. Is it known if the cone penetrometer groundwater samples were turbid or non-turbid?

Answer: Reference Section L, Attachment L-4, Representative Sample Task, Section 4.1, 4th paragraph. Offerors should assume that the samples are non-turbid.

The solicitation will be amended.

Question L-160: The two decontamination tanks are located below the decon area in the basement of F-wing. What are the dimensions of these tanks? What is in the tanks?

Answer: Reference Section L, Attachment L-4, Representative Sample Task, As-Built Drawing 6. The two hold-up tanks shown in the basement of the F-wing in As-Built Drawing 6 are approximately 6 feet long and approximately 3.5 feet in diameter. Offerors should assume that the tanks are empty.

The solicitation will be amended.

Question L-161: At what depth below ground surface are saturated conditions encountered?

Answer: Reference Section L, Attachment L-4, Representative Sample Task, Section 4.1, 1st through 4th paragraphs. The uppermost contiguous aquifer is approximately 60 to 70 feet below ground surface (bgs) in the vicinity of the site. However, in the vicinity of the MRB, the shallower glacial drift contains saturated coarser-grained units encountered at approximately 18 to 20 feet bgs, and again at 30 to 40 feet bgs.

The solicitation will be amended.

Question L-162: Where all the VOC samples of Table 4 collected in the unsaturated zone?

Answer: Reference Section L, Attachment L-4, Representative Sample Task, Table 4. The VOC soil samples shown in Table 4 were collected at depths of 3-4 feet below ground surface (bgs) to 9-10 feet bgs, and are all in the unsaturated zone.

The solicitation will be amended.

Question L-163: Third line at the top of page 4 – What is meant by "adjacent"? What is the distance from the building that soil must be excavated?

Answer: Reference Section L, Attachment L-4, Representative Sample Task, Section 4.1, last paragraph. Section 4.1 states "Contaminated soil adjacent to the building (and below the building if it occurs there) must be remediated during the project, with an expected requirement of meeting residential land use criteria despite planned continued industrial use at the site." This statement refers to the contaminated soil as indicated by soil samples in Figure 2 and 12. The distance from the building must be determined by comparing soil sampling data to the State of Illinois residential land use criteria.

Question L-164: Will WIPP provide head space gas [HSG] testing services? What is the scope of the support required by offerors to support HSG testing?

Answer: Reference Section L, Attachment L-4, Representative Sample Task, Section 4.4, 1st paragraph. Section 4.4 states "The Contractor shall perform services including, but not limited to,… waste management including offsite disposition of remaining sources, disposal of all low-level radioactive waste (LLW), mixed low-level radioactive and hazardous waste (MLLW), hazardous waste, and clean industrial or sanitary wastes; all activities required to support disposal of transuranic wastes to the DOE Waste Isolation Pilot Plant (WIPP) facility;…". Offerors are responsible for determining whether or not HSG testing is required based on their approach to the Sample Task. If applicable to the offeror's approach, the offeror is responsible for the procurement of and providing of HSG testing services and the costs associated with such.

Question L-165: On Page 83 of 98, Proposal Section L-31, "Safety Basis Approach", offerors are directed to revise the BIO and the TSR. We are directed to "revise these documents as appropriate to reflect planned decontamination and demolition of the facility". On Page 7 of 34 of the sample problem, offerors are told that the "Nuclear Safety Analysis Report" for the FSMHF are out of date and that the BIO and STR [sic] have been approved. Offerors are directed to "revise these documents, as appropriate, to reflect the planned D&D of the facility". On Page 10 of 34 in the sample problem the respondents are told that the task scope includes a number of documents. Among those are documents relating to project safety. We must prepare project and safety documentation in accordance with a number of specifically referenced DOE orders and other documents "including but not limited to the following: revised Basis for Interim Operations(BIO), Technical Safety Requirements and Deactivation Plan". In order to revise the safety documentation, as directed, we need the current BIO and TSR documents. Will a link be provided so that these documents can be accessed for this purpose?

Answer: Reference L.31 EMCBC-L-1004 Proposal Preparation Instructions - Technical Proposal - Volume II (1) Criterion 1 - Technical and Management Approach (Sample Task). "For purposes of the sample task, the offeror need only provide summarized contents of each of the deliverables/reports identified in the sample task as well as a listing and summarized contents of other documents/reports that the offeror proposes in its approach as necessary to meet the requirements identified in the sample task." Offerors are not expected to provide a revised Basis for Interim Operations (BIO), Technical Safety Requirements and Deactivation Plan. Offerors are expected to provide a summary of the changes that they would propose to the contents of the BIO and TSR based on their approach. The BIO and TSR documents are not necessary for the offeror to provide the summarized contents of the BIO and TSR changes based on the offeror's approach.

Question L-166: For the soil and groundwater samples reported on in the RFP, what other analytical results are available that report on the concentrations of other constituents?

Answer: Reference Section L, Attachment L-4, Representative Sample Task. Offerors should assume that no other analytical results except those that are provided in the solicitation (and as indicated in questions and answers) is available.

Question L-167: Do the residents in the residential areas shown on Figure 1 use residential wells installed in the dolomite as a drinking water supply?

Answer: Reference Section L, Attachment L-4, Representative Sample Task, Section 3, Number 1, 3rd paragraph. Section 3 states that "The dolomite, which is approximately 200 feet thick in the RAFTL area, is an aquifer used locally as a water supply, including drinking water, for low-capacity wells." Offerors should assume that the residential areas shown on Figure 1 use residential wells installed in the dolomite as a drinking water supply.

Question L-168: What is the drinking water supply of the residents that are shown in Figure 1?

Answer: See answer to Question L-167.

Question L-169: The Sample Task Description (Section L, Attachment L-4), Section 3.0, General Background, Subsection 2 the status of use of the FSMHF and its current status. It also identifies the balance of the MRB but does not describe its operational status. Question: Can the general condition of the MRB be described? Does it contain office and laboratory furniture and general building furnishings, or have these been removed?

Answer: Reference Section L, Attachment L-4, Representative Sample Task, Section 4.3, 2nd to last paragraph. The MRB facility utilities including ventilation and exhaust systems, and fire detection and alarm system, have been maintained and are fully operational. Reference the answer to Question L-108 for the condition of the Hotcell systems. See answer to Question L-149 concerning office and laboratory furniture and general building furnishings.

Question L-170: The answer to Question L-11 posted on 11/10/09 indicated that Offerors should assume that the materials in the 25 residue cans potentially are pyrophoric and may require treatment. More information is needed due to this new information added to the sample problem.

What is the weight of an empty residue can?
Answer: Reference Section L, Attachment L-4, Representative Sample Task, Table 7. The approximate weight of an empty residue can is 300 grams.

What maximum level of U-235 enrichment could be encountered in the uranium in the residue cans?
Answer: See answer to Question L-135.

What percentage by weight of the uranium residue in the cans should we assume could be pyrophoric?
Answer: See answer to Question L-135. Offerors should assume that all cans contain pyrophoric material.

Can it be assumed that a PISA or positive USQ does not exist in the hot cell?
Answer: There is no PISA or positive USQ.

What is the typical weight percentage for the various constituents that comprise the remaining 800 grams of non-specified mass for each residue can?
Answer: See answer to Question L-135.

Can DOE provide a sample BIO and TSRs or at least a detailed description of the safety SSCs operating limits, Specific Administrative Controls (SACs), surveillances and operating mode definitions?
Answer: See answer to Question L-165 and L-169.

Is the U-235 alloyed with a material other than uranium, if so what should we assume?
Answer: See answer to Question L-135.

Reference Question L-74. The answer to Question L-74 should reference L-47, not L-17.